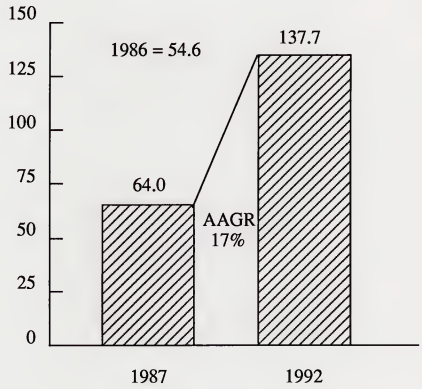
# SYSTEMS INTEGRATION

# VENDOR ISSUES AND PERSPECTIVES

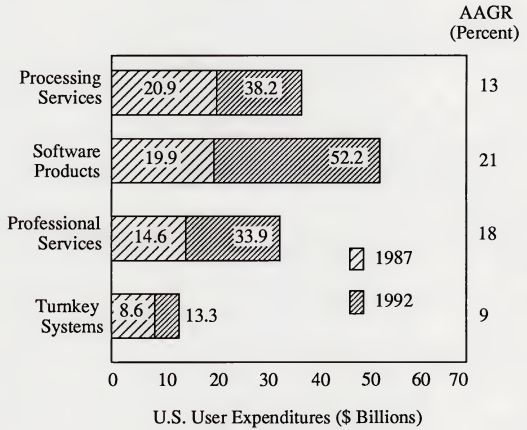
## OVERVIEW

- Markets and Components
- Customer Requirements
- Products and Services
- Vendor Focus/Characteristics
- INPUT's Observations
- US Players (1987)/Rising Stars
- A View of IBM

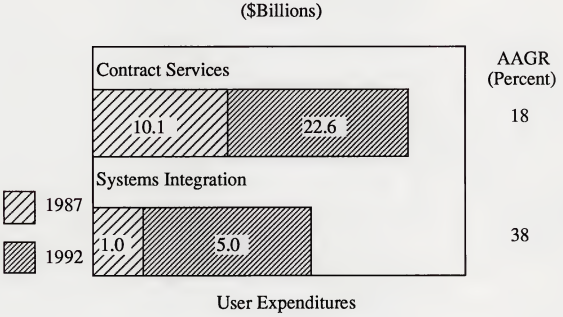
## INFORMATION SERVICES MARKET
## ($ Billions)



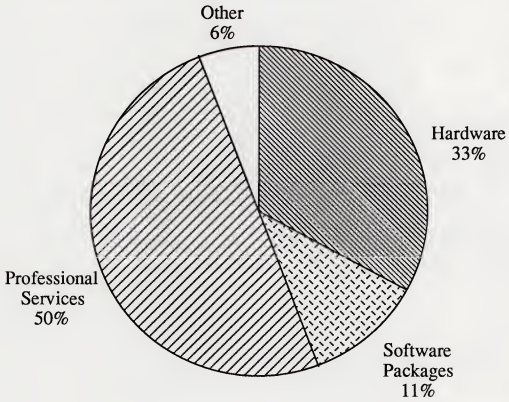
## INFORMATION SERVICES INDUSTRY BY DELIVERY MODE



## PROFESSIONAL SERVICES MARKETS
## COMMERCIAL SEGMENTS 1987-1992

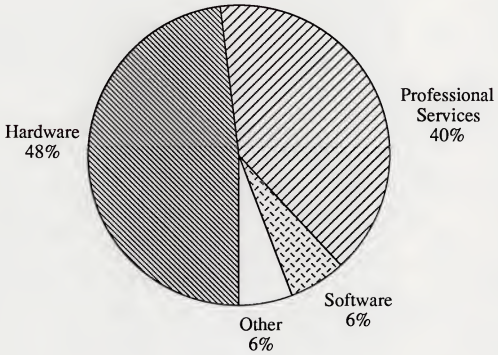


## EXPENDITURES BY COMPONENT GROUP
## 1987 COMMERCIAL PROJECT SAMPLE



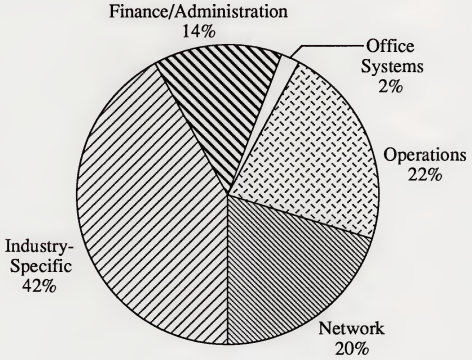

N = 24 Projects

## EXPENDITURES BY COMPONENT GROUP
## 1987 FEDERAL PROJECT SAMPLE




N = 27 Projects

## COMMERCIAL SI APPLICATIONS




N = 64

## SYSTEMS INTEGRATION CUSTOMER REQUIREMENTS

- Single-Source Solution/Accountability (Risk Aversion)
- Rapid and Cost-Effective Implementation
- Applicable Range of Technical Skills
- Reputation—Credibility—Experience

## PRODUCTS/SERVICES IN SYSTEMS INTEGRATION PROJECTS

- Equipment
  - Information Systems
  - Communications
- Software Products
  - Systems Software
  - Applications Software

## PRODUCTS/SERVICES IN SYSTEMS INTEGRATION PROJECTS

- Professional Services
  - Consulting
    - ° Feasibility and Trade-off Studies
    - ° Selection of Hardware, Network, and Software
  - Project Management

## PRODUCTS/SERVICES IN SYSTEMS INTEGRATION PROJECTS

- Design/Integration
  - Systems Design
  - Installation of Hardware, Network, and Software
  - Demonstration and Testing

## PRODUCTS/SERVICES IN SYSTEMS INTEGRATION PROJECTS

- Software Development
  - Modification of Software Packages
  - Modification of Existing Software
  - Custom Development of Software
- Education/Training and Documentation
- Operation and Maintenance (During Contract)

## PRODUCTS/SERVICES IN SYSTEMS INTEGRATION PROJECTS

- Other Products/Services
  - Data Processing Supplies
  - Processing/Network Services
  - Data/Voice Communication Services
  - Engineering Services
  - Other

## SYSTEMS INTEGRATION VENDOR FOCUS

- Present a Full-Service Image
- Leverage and Promote Proprietary Technology
- Establish Strategic Partnerships (Alliances)
- Initiate and Maintain Overall Account Control

## SYSTEMS INTEGRATION VENDOR CHARACTERISTICS

- Large, Fiscally Responsible
- Technologically Advanced
- Innovative
- Network-Based
- Operational Capability
- Application/Industry Expertise

## INPUT'S OBSERVATIONS

- Macro Issues
- Competitive Environment

## MAJOR CUSTOMER ISSUES— INFORMATION SERVICES

- Focusing on End-User Needs (Vertical)
- Complexity Begets Customization
- Implementation Skill Mix Shortfall Begets Professional Services Boom
- Competitive Advantage Drives Systems Integration
- Alliance Selection and Formation

## COMPETITIVE ENVIRONMENT
## VENDORS

- Consolidation
- Increasing Overlap
- 'Power Player' Game
  - New Entrants
- Positioning/Control

## THE PLAYERS

- By Market Share, 1987
- Commercial Component
- Federal Component
- By Class of Competition
- Rising Competition

## SYSTEMS INTEGRATION MARKET SHARE, 1987

| Vendor | Market Share | |
|---|---|---|
| | Revenue($M) | Percent |
| IBM | 515 | 15 |
| EDS | 450 | 13 |
| AA & Co. | 265 | 8 |
| CSC | 195 | 6 |
| CDC | 133 | 4 |
| Unisys | 95 | 3 |
| Total Leading Vendors | 1,653 | 49 |

Total Mkt = $3,400 Million

## COMMERCIAL SI
## MARKET SHARE, 1987

| Vendor | Market Share | |
|---|---|---|
| | Revenue($M) | Percent |
| IBM | 375 | 21 |
| AA & Co. | 225 | 13 |
| EDS | 130 | 7 |
| Control Data | 108 | 6 |
| Total Leading Vendors | 838 | 47 |

Total Mkt = $ 1,800 Million

## FEDERAL SI
## MARKET SHARE, 1987

| Vendor | Market Share | |
|---|---|---|
| | Revenue($M) | Percent |
| EDS | 320 | 20 |
| CSC | 185 | 12 |
| IBM | 140 | 9 |
| MMDS | 80 | 5 |
| BCS | 60 | 4 |
| Total Leading Vendors | 785 | 50 |

Total Mkt = 1,600 Million

## MARKET SHARE BY CLASS OF COMPETITION
## 1987

| | Percent of Market | |
|---|---|---|
| **Vendor Class** | **Federal** | **Commercial** |
| Hardware Manufacturers | 31 | 45 |
| Communication Vendors | 4 | 6 |
| Professional Services | 38 | 20 |
| "Big 8" | 11 | 21 |
| Aerospace | 12 | 5 |
| Other | 4 | 3 |

## RISING COMPETITION

CTG

Systemhouse

AT & T

AMS

Wang

Cincinnati Bell

AGS

Digital

Nontraditionals:
Baxter & Travenol,
Harnischfager,
Bechtel,
Nippon

## IBM'S STRENGTHS

- Product Suite
- Major Position in Professional Services
- Network Services Offering
- Demonstrated Project Management Capability
- Fiscal Capability
- Vertical Industry Expertise
- Account Control
- Customer Service/Support Orientation

## IBM'S WEAKNESSES

- Perceived Lack of Objectivity
- Lack of Integrated Project Offering
- Lack of Focus on "SI" as a Product

## LEVERAGE POINTS

- Network Services/EDI
- Financial Sell/Project Financing
- SAA/SNA/SQL Integrating Capability
- Systems Operations
- Use of Existing Alliances
- Customer Base

## FUTURE TRENDS TO WATCH

- Move Toward Systems Operations
- Growth of Communications-Based Applications
- "SI" in Increasing Control of Hardware Sales
- Integration of Distributed Data Environments